10526388

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NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	OCT 23	The Derwent World Patents Index suite of databases on STN has been enhanced and reloaded
NEWS	4	OCT 30	CHEMLIST enhanced with new search and display field
NEWS	5	NOV 03	JAPIO enhanced with IPC 8 features and functionality
NEWS	6	NOV 10	CA/CAplus F-Term thesaurus enhanced
NEWS	7	NOV 10	STN Express with Discover! free maintenance release Version 8.01c now available
NEWS	8	NOV 20	CAS Registry Number crossover limit increased to 300,000 in additional databases
NEWS	9	NOV 20	CA/CAplus to MARPAT accession number crossover limit increased to 50,000
NEWS	10	DEC 01	CAS REGISTRY updated with new ambiguity codes
NEWS	11	DEC 11	CAS REGISTRY chemical nomenclature enhanced
NEWS	12	DEC 14	WPIDS/WPINDEX/WPIX manual codes updated
NEWS	13	DEC 14	GBFULL and FRFULL enhanced with IPC 8 features and functionality
NEWS	14	DEC 18	CA/CAplus pre-1967 chemical substance index entries enhanced with preparation role
NEWS	15	DEC 18	CA/CAplus patent kind codes updated
NEWS	16	DEC 18	MARPAT to CA/CAplus accession number crossover limit increased to 50,000
NEWS	17	DEC 18	MEDLINE updated in preparation for 2007 reload
NEWS	18	DEC 27	CA/CAplus enhanced with more pre-1907 records
NEWS	19	JAN 08	CHEMLIST enhanced with New Zealand Inventory of Chemicals
NEWS	20	JAN 16	CA/CAplus Company Name Thesaurus enhanced and reloaded
NEWS	21	JAN 16	IPC version 2007.01 thesaurus available on STN
NEWS	22	JAN 16	WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
NEWS	23	JAN 22	CA/CAplus updated with revised CAS roles
NEWS	24	JAN 22	CA/CAplus enhanced with patent applications from India

NEWS EXPRESS	NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8
NEWS X25	X.25 communication option no longer available

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FILE 'HOME' ENTERED AT 10:39:55 ON 23 JAN 2007

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 10:40:08 ON 23 JAN 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 22 JAN 2007 HIGHEST RN 918106-10-2
DICTIONARY FILE UPDATES: 22 JAN 2007 HIGHEST RN 918106-10-2

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TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

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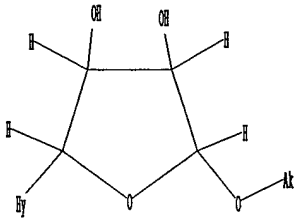
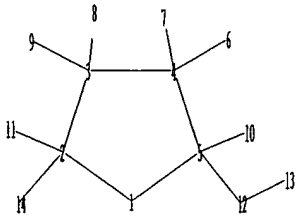
REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10526388s1.str





chain nodes :
6 7 8 9 10 11 12 13 14
ring nodes :
1 2 3 4 5
chain bonds :
2-11 2-14 3-8 3-9 4-6 4-7 5-10 5-12 12-13
ring bonds :
1-2 1-5 2-3 3-4 4-5
exact/norm bonds :
1-2 1-5 2-3 2-14 3-4 3-8 4-5 4-7 5-12 12-13
exact bonds :

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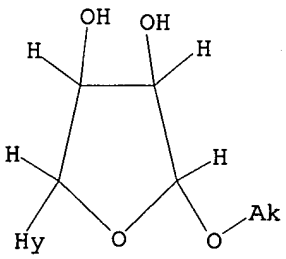
2-11 3-9 4-6 5-10

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:Atom

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1
SAMPLE SEARCH INITIATED 10:40:26 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 20157 TO ITERATE

9.9% PROCESSED 2000 ITERATIONS 0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 394641 TO 411639
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full
FULL SEARCH INITIATED 10:41:08 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 406747 TO ITERATE

100.0% PROCESSED 406747 ITERATIONS 66 ANSWERS
SEARCH TIME: 00.00.08

L3 66 SEA SSS FUL L1

=> fil hcaplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 172.55 172.76

FILE 'HCAPLUS' ENTERED AT 10:41:23 ON 23 JAN 2007
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FILE COVERS 1907 - 23 Jan 2007 VOL 146 ISS 5
FILE LAST UPDATED: 22 Jan 2007 (20070122/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

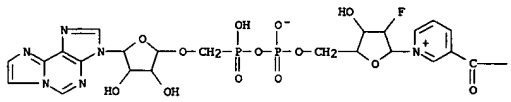
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3
L4 52 L3

=> d ed ibib abs hitstr L4 25-52

L4 ANSWER 25 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 26 Jul 1992
ACCESSION NUMBER: 1992:422343 HCAPLUS
DOCUMENT NUMBER: 117:22343
TITLE: Slow-binding inhibition of NAD+ glycohydrolase by arabino analogs of β-NAD+
AUTHOR(S): Muller-Steffner, Helene M.; Malver, Olaf; Hosie, Lynn; Oppenheimer, Norman J.; Schuber, Francis
CORPORATE SOURCE: Fac. Pharm., Univ. Louis Pasteur Strasbourg, Illkirch, 67400, Fr.
SOURCE: Journal of Biological Chemistry (1992), 267(14), 9606-11
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Modifications at the 2'-position of the nicotinamide-ribosyl moiety influence dramatically the nature of the interactions of the modified β-NAD with calf spleen NAD glycohydrolase (EC 3.2.2.6), an enzyme that cleaves the nicotinamide-ribose bound in NAD(P). Nicotinamide arabinoside adenine dinucleotide (ara-NAD) and nicotinamide 2'-deoxy-2'-fluoroarabinoside adenine dinucleotide (araF-NAD) are not hydrolyzed at measurable rates and are the first documented examples of reversible slow binding inhibitors of this class of enzyme. The kinetic data obtained are consistent with both slow kon and koff rate consts. in the formation of an enzyme-inhibitor complex, i.e. the association rate consts. are about 104 and 106 slower than diffusion rates, resp., for araF-NAD and ara-NAD, and the half-life of the complex is about 3-10 min for both analogs. The kinetic model does not account for a low turnover of an ADP-ribosyl-enzyme intermediary complex. AraF-NAD is one of the most potent inhibitors described for NAD glycohydrolase.
IT 142177-70-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with NAD glycohydrolase, kinetics of)
RN 142177-70-6 HCAPLUS
CN Pyridinium, 3-(aminocarbonyl)-1-[2-deoxy-2-fluoro-5-O-[hydroxy(phosphonooxy)phosphinyl]-β-D-arabinofuranosyl]-, inner salt, P'→5'-ester with 3-β-D-ribofuranosyl-3H-imidazo[2,1-i]purine (9CI) (CA INDEX NAME)

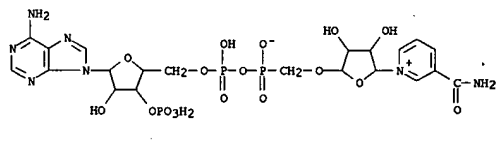
PAGE 1-A



L4 ANSWER 25 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B

L4 ANSWER 26 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 27 Jun 1992
ACCESSION NUMBER: 1992:251558 HCAPLUS
DOCUMENT NUMBER: 116:251558
TITLE: A high yield microscale enzymatic synthesis and purification of 14C-labeled nicotinamide adenine dinucleotide phosphate (NADP+)
AUTHOR(S): Ronneberg, Andrew; Metz, Gordon; Weld, Richard; Roffey, Peter; Craney, Chris
CORPORATE SOURCE: Dep. Chem., Occidental Coll., Los Angeles, CA, 90041, USA
SOURCE: Journal of Labelled Compounds and Radiopharmaceuticals (1992), 31(4), 329-32
CODEN: JLCRD4; ISSN: 0362-4803
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Uniformly labeled (U) 14C NADP (NADP+) was synthesized by phosphorylating [U-14C]NAD (NAD+) in the presence of immobilized NAD+ kinase. The 15 μCi (600 μL) synthesis consistently achieved yields between 80% and 85% and radiochem. purities greater than 95%. The [U-14C]NADP+ was purified by high performance anion-exchange chromatog. using a gradient elution of ammonium bicarbonate. This procedure may be applicable to the synthesis of other charged, UV-absorbing products of enzyme-catalyzed reactions.
IT 141646-06-2P
RL: PREP (Preparation)
(preparation of, enzymic)
RN 141646-06-2 HCAPLUS
CN Adenosine 5'-(trihydrogen diphosphate), 3'-(dihydrogen phosphate), P'→5'-ester with 3-(aminocarbonyl)-1-β-D-ribofuranosylpyridinium, inner salt, labeled with carbon 14 (9CI) (CA INDEX NAME)



L4 ANSWER 27 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 15 Nov 1991
ACCESSION NUMBER: 1991:608461 HCAPLUS
DOCUMENT NUMBER: 115:208461
TITLE: Preparation of phosphorus-containing nucleoside analogs as antitumors and antivirals
INVENTOR(S): Kim, Choung Un; Martin, John C.; Misco, Peter F.; Luh, Bing Yu
PATENT ASSIGNEE(S): Bristol-Myers Co., USA
SOURCE: Eur. Pat. Appl., 48 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 398231	A2	19901122	EP 1990-109066	19900514
EP 398231	A3	19930602		
EP 398231	B1	19970716		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
CA 2015671	A1	19901115	CA 1990-2015671	19900427
CA 2015671	C	20000425		
CA 2297294	A1	19901115	CA 1990-2297294	19900427
CA 2297294	C	20051108		
AU 9055012	A	19901115	AU 1990-55012	19900514
AU 630953	B2	19921112		
ZA 9003647	A	19910130	ZA 1990-3647	19900514
AT 155480	T	19970815	AT 1990-109066	19900514
ES 2104570	T3	19971016	ES 1990-109066	19900514
KR 167080	B1	19990415	KR 1990-6858	19900514
JP 03005493	A	19910111	JP 1990-123262	19900515
JP 2900064	B2	19990602		
AU 9224592	A	19921119	AU 1992-24592	19920918
AU 646594	B2	19940224		
US 5688778	A	19971118	US 1995-391312	19950217
US 5686611	A	19971111	US 1995-488339	19950607
US 5693798	A	19971202	US 1995-488337	19950607
US 5696265	A	19971209	US 1995-488340	19950607
US 5726174	A	19980310	US 1995-488338	19950607
US 5837871	A	19981117	US 1995-486991	19950607
KR 167089	B1	19990330	KR 1998-20407	19980602

PRIORITY APPLN. INFO.: US 1989-352303 A 19890515; US 1990-481569 A 19900222; US 1990-481659 19900222; CA 1990-2015671 A3 19900427; US 1991-765774 B1 19910926; US 1995-391312 A3 19950217

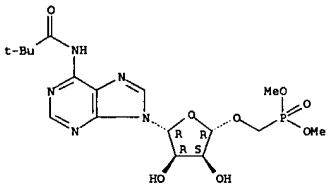
OTHER SOURCE(S): MARPAT 115:208461
GI For diagram(s), see printed CA Issue.
AB Title compds. XO-P(O)(OX1)CHROCHR1B [I; X, X1 = H, alkyl, cation; R, R1 = H, alkyl, hydroxyalkyl, alkanoyl; B = purinyl, pyrimidinyl], II [Y, Z = H, OH, (substituted) alkyl, or YZ = O, CH2], III [R2 = OH], IV, and their pharmaceutically acceptable salts, especially useful as retrovirus inhibitors, were prepared BzOCH2OCH2OBz [prepared from BzONa and (ClCH2)2O], was treated with 1-(trimethylsilyl)thymine (prepared from thymine and Me3SiCl) in CF3SO3SiMe3 at 25° for 8 h to give 1-[[(benzoyloxy)methoxy]methyl]thymine, which was condensed with (EtO)2P(O)CH2OH in benzene at 85°

L4 ANSWER 27 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
for 20 min to give I (X = X1 = Et, R = R1 = H, B = 1-thyminyl). 9-[3-(Phosphonomethoxy)methoxymethyl]guanine di-Na salt (prepn. given) had an ID50 of 2.6 μg/mL against herpes simplex virus-1 compared with 0.5 μg/mL for acyclovir.

IT 132178-55-3P 132204-44-5P 136688-39-6P
136688-40-9P 136688-41-0P 136688-42-1P
136688-43-2P 136688-44-3P 136688-45-4P
136688-46-5P 136688-47-6P 136711-57-4P
136778-55-7P 136778-58-0P 136778-60-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as antiviral and antitumor)

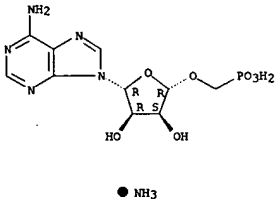
RN 132178-55-3 HCAPLUS
CN Phosphonic acid, [[[(2R,3S,4R,5R)-5-[6-[(2,2-dimethyl-1-oxopropyl)amino]-9H-purin-9-yl]tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, dimethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



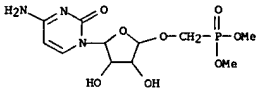
RN 132204-44-5 HCAPLUS
CN Phosphonic acid, [[[5-(6-amino-9H-purin-9-yl)tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, monoammonium salt, [2R-(2α,3β,4β,5.alpha.)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

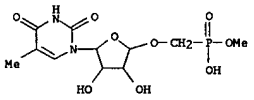


● NH_3

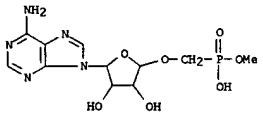
L4 ANSWER 27 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



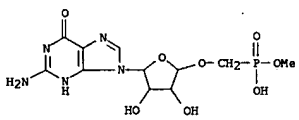
RN 136688-43-2 HCAPLUS
CN Phosphonic acid, [[[5-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, monomethyl ester, [2R-(2α,3β,4β,5α)]- (9CI) (CA INDEX NAME)



RN 136688-44-3 HCAPLUS
CN Phosphonic acid, [[[5-(6-amino-9H-purin-9-yl)tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, monomethyl ester, [2R-(2α,3β,4β,5.alpha.)]- (9CI) (CA INDEX NAME)

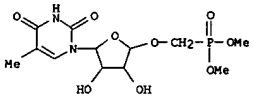


RN 136688-45-4 HCAPLUS
CN Phosphonic acid, [[[5-(2-amino-1,6-dihydro-6-oxo-9H-purin-9-yl)tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, monomethyl ester, [2R-(2α,3β,4β,5α)]- (9CI) (CA INDEX NAME)

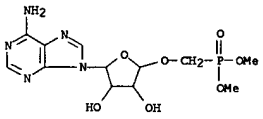


RN 136688-46-5 HCAPLUS
CN Phosphonic acid, [[[5-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, disodium salt, [2R-(2α,3β,4β,5α)]- (9CI) (CA INDEX NAME)

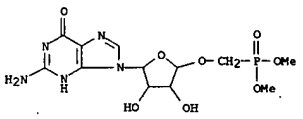
L4 ANSWER 27 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
RN 136688-39-6 HCAPLUS
CN Phosphonic acid, [[[5-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, dimethyl ester, [2R-(2α,3β,4β,5α)]- (9CI) (CA INDEX NAME)



RN 136688-40-9 HCAPLUS
CN Phosphonic acid, [[[5-(6-amino-9H-purin-9-yl)tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, dimethyl ester, [2R-(2α,3β,4β,5.alpha.)]- (9CI) (CA INDEX NAME)

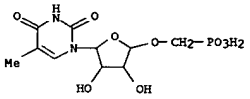


RN 136688-41-0 HCAPLUS
CN Phosphonic acid, [[[5-(2-amino-1,6-dihydro-6-oxo-9H-purin-9-yl)tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, dimethyl ester, [2R-(2α,3β,4β,5α)]- (9CI) (CA INDEX NAME)



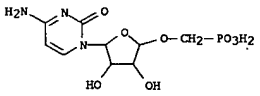
RN 136688-42-1 HCAPLUS
CN Phosphonic acid, [[[5-(4-amino-2-oxo-1(2H)-pyrimidinyl)tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, dimethyl ester, [2R-(2α,3β,4β,5α)]- (9CI) (CA INDEX NAME)

• L4 ANSWER 27 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



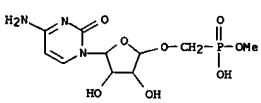
●2 Na

RN 136688-47-6 HCAPLUS
CN Phosphonic acid, [[[5-(4-amino-2-oxo-1(2H)-pyrimidinyl)tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, disodium salt, [2R-(2α,3β,4β,5α)]- (9CI) (CA INDEX NAME)



●2 Na

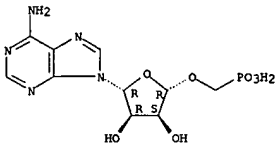
RN 136711-57-4 HCAPLUS
CN Phosphonic acid, [[[5-(4-amino-2-oxo-1(2H)-pyrimidinyl)tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, monomethyl ester, [2R-(2α,3β,4β,5α)]- (9CI) (CA INDEX NAME)



RN 136778-55-7 HCAPLUS
CN Phosphonic acid, [[[5-(6-amino-9H-purin-9-yl)tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, disodium salt, [2R-(2α,3β,4β,5.alpha.)]- (9CI) (CA INDEX NAME)

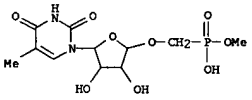
Absolute stereochemistry.

L4 ANSWER 27 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



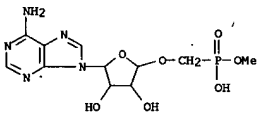
●2 Na

RN 136778-58-0 HCAPLUS
CN Phosphonic acid, [[[5-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, monomethyl ester, monosodium salt, [2R-(2α,3β,4β,5α)]- (9CI) (CA INDEX NAME)



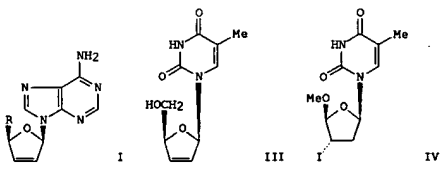
● Na

RN 136778-60-4 HCAPLUS
CN Phosphonic acid, [[[5-(6-amino-9H-purin-9-yl)tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, monomethyl ester, monoammonium salt, [2R-(2α,3β,4β,5α)]- (9CI) (CA INDEX NAME)



● NH3

L4 ANSWER 28 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 03 May 1991
ACCESSION NUMBER: 1991:164688 HCAPLUS
DOCUMENT NUMBER: 114:164688
TITLE: Regiospecific and highly stereoselective electrophilic addition to furanoid glycals: synthesis of phosphonate nucleotide analogs with potent activity against HIV
AUTHOR(S): Kim, Choung Un; Luh, Bing Y.; Martin, John C.
CORPORATE SOURCE: Pharm. Res. Inst., Bristol-Myers Squibb Co., Wallingford, CT, 06492-7660, USA
SOURCE: Journal of Organic Chemistry (1991), 56(8), 2642-7
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 114:164688
GI



I III I IV

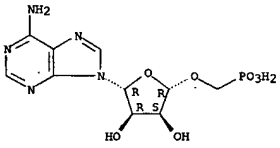
AB Regiospecific and highly stereoselective electrophilic addition to furanoid glycals was used as a key step in the synthesis of phosphonate isosteres of nucleoside monophosphates. The synthesis of the phosphonate isostere of adenosine monophosphate is presented. Despite the acetal structure, phosphonate derivs., e.g., I [R = P(O)(OH)ONH4] (II), were substantially more acid stable than the corresponding nucleosides, e.g. I (R = CH2OH), with respect to glycosidic bond cleavage. II exhibited a potent antiretroviral activity comparable to that of didehydrodideoxynucleoside III. The determination of the crystal structure of iodomethoxyfurylthymine IV helped provide guidance on the stereochem. outcome of the electrophilic addns.

IT 132204-44-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 132204-44-5 HCAPLUS
CN Phosphonic acid, [[[5-(6-amino-9H-purin-9-yl)tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, monoammonium salt, [2R-(2α,3β,4β,5.alpha.)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 27 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

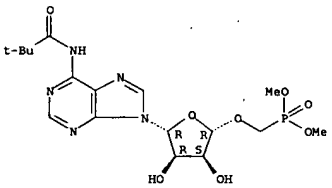
L4 ANSWER 28 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



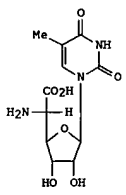
● NH3

IT 132178-55-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, in synthesis of phosphonate nucleotide analogs)
RN 132178-55-3 HCAPLUS
CN Phosphonic acid, [[[(2R,3S,4R,5R)-5-[6-[(2,2-dimethyl-1-oxopropyl)amino]-9H-purin-9-yl]tetrahydro-3,4-dihydroxy-2-furanyl]oxy]methyl]-, dimethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

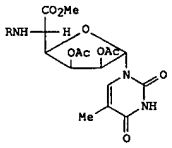


L4 ANSWER 29 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 21 Jul 1990
ACCESSION NUMBER: 1990:424393 HCAPLUS
DOCUMENT NUMBER: 113:24393
TITLE: Glycosyl α-amino acids via stereocontrolled buildup of a penaldic acid equivalent. A novel synthetic approach to the nucleosidic component of the polyoxins and related substances
AUTHOR(S): Garner, Philip; Park, Jung Min
CORPORATE SOURCE: Dep. Chem., Case West. Reserve Univ., Cleveland, OH, 44106-2699, USA
SOURCE: Journal of Organic Chemistry (1990), 55(12), 3772-87
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 113:24393
GI

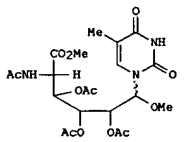


I

II



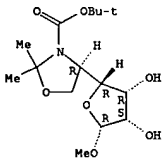
III



IV

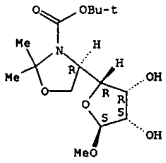
AB A novel approach to glycosyl α-amino acids is exemplified by the stereocontrolled and asym. synthesis of thymine polyoxin C (I) from the known (serine-derived) penaldic acid equivalent II. The overall synthetic strategy involves four distinct phases: (1) diastereoselective addition of a 3-carbon nucleophile (Et lithiopropiolate) to the protected serinal derivative
(2) stereocontrolled elaboration of the 5-amino-5-deoxyallofuranose moiety via cis-hydroxylation of a 4-substituted butenolide, (3) release of the latent α-amino acid moiety in a suitably protected form, and (4)

L4 ANSWER 29 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



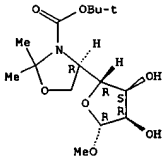
L4 ANSWER 29 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
stereo- and regioselective nucleoside formation using Vorbrueggen's glycosylation methodol. followed by deprotection. A similar route employing LiC.tplbond.CCH(OMe)2 as the 3-carbon nucleophile led to the formation of stereoisomeric 5-amino-5-deoxymannofuranuronic acid nucleosides, e.g., III (R = Ac, Cbz) along with novel acyclic 1-methoxy-D-allo-hexouronate nucleosides, e.g., IV.
IT 127256-98-8P 127308-61-6P 127308-62-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and acetylation of)
RN 127256-98-8 HCAPLUS
CN 3-Oxazolidinecarboxylic acid, 2,2-dimethyl-4-(tetrahydro-3,4-dihydroxy-5-methoxy-2-furanyl)-, 1,1-dimethylethyl ester, [2R-[2α(R*),3α,4α,5β]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 127308-61-6 HCAPLUS
CN 3-Oxazolidinecarboxylic acid, 2,2-dimethyl-4-(tetrahydro-3,4-dihydroxy-5-methoxy-2-furanyl)-, 1,1-dimethylethyl ester, [2R-[2α(R*),3β,4β,5α]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

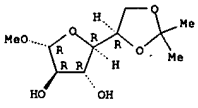


RN 127308-62-7 HCAPLUS
CN 3-Oxazolidinecarboxylic acid, 2,2-dimethyl-4-(tetrahydro-3,4-dihydroxy-5-methoxy-2-furanyl)-, 1,1-dimethylethyl ester, [2R-[2α(R*),3α,4α,5α]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

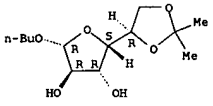
L4 ANSWER 30 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 06 Jul 1990
ACCESSION NUMBER: 1990:406704 HCAPLUS
DOCUMENT NUMBER: 113:6704
TITLE: Synthesis of an immunologically active component of the extracellular polysaccharide produced by Aspergillus and Penicillium species
AUTHOR(S): Veeneman, G. H.; Notermans, S.; Hoogerhout, P.; Van Boom, J. H.
CORPORATE SOURCE: Gorlaeus Lab., Leiden, 2300 RA, Neth.
SOURCE: Recueil des Travaux Chimiques des Pays-Bas (1989), 108(10), 344-50
CODEN: RTCPA3; ISSN: 0165-0513
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 113:6704
AB The synthesis of immunol. active component of the extracellular polysaccharide produced by Aspergillus and Penicillium species, in the form of tetrameric β(1→5) interlinked D-galactofuranoside, is described. Key reactions are the assemblage of a galactofuranosyl donor, having a selective removable protecting group at C-5, and a stepwise elongation-deprotection procedure. Furthermore, the synthesis of β(1→2), β(1→3), and β(1→6)-D-galactofuranosyl dimers is reported.
IT 20869-14-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepns. and benzoylation of)
RN 20869-14-1 HCAPLUS
CN β-D-Galactofuranoside, methyl 5,6-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 31 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 19 Aug 1988
ACCESSION NUMBER: 1988:455090 HCAPLUS
DOCUMENT NUMBER: 109:55090
TITLE: Preparation of long-chain alkyl D-glucosides by alcoholysis of 1,2:5,6-di-O-isopropylidene-α-D-glucofuranose
AUTHOR(S): Straathof, A. J. J.; Romein, J.; Van Rantwijk, F.; Kieboom, A. P. G.; Van Bekkum, H.
CORPORATE SOURCE: Lab. Org. Chem., Delft Univ. Technol., Delft, 2628 BL, Neth.
SOURCE: Starch/Staerke (1987), 39(10), 362-8
CODEN: STARDD; ISSN: 0038-9056
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The acid-catalyzed reaction of 1,2:5,6-di-O-isopropylidene-α-D-glucofuranose (I) with BuOH was studied using HPLC and NMR. The course of the reaction, which involved 6 compds. containing isopropylidene groups, was elucidated. Eventually an anomeric mixture of Bu D-glucosides was formed. H_2SO_4, $MeSO_3H$, HBF_4, an ion-exchange resin (-SO_3H), and a SiO_2-Al_2O_3 catalyst showed different selectivities and catalytic activities. The ion-exchange resin was the catalyst of choice, yielding ≤90% Bu D-glucoside. Reaction of I with octanol gave a mixture from which octyl α-D-glucopyranoside could be crystallized in 30% yield. An almost quant. yield of the latter compound, however, was obtained by recycling the mother liquor. This procedure also avoids wasting of the ion-exchange resin catalyst and the excess of octanol. 1-Decanol and 1-dodecanol gave crystalline α-D-glucopyranosides by the same method.
IT 115393-48-1P 115409-39-7P
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in alcoholysis of diisopropylideneglucofuranose with butanol)
RN 115393-48-1 HCAPLUS
CN β-D-Glucofuranoside, butyl 5,6-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

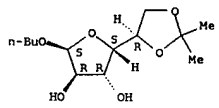
Absolute stereochemistry.



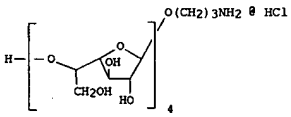
RN 115409-39-7 HCAPLUS
CN α-D-Glucofuranoside, butyl 5,6-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 31 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



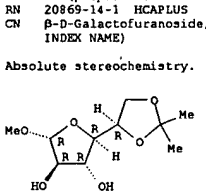
L4 ANSWER 32 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 Dec 1987
ACCESSION NUMBER: 1987:617959 HCAPLUS
DOCUMENT NUMBER: 107:217959
TITLE: Synthesis of a cell-wall component of Aspergillus niger containing four β(1-5)-interlinked D-galactofuranosyl residues
AUTHOR(S): Veeneman, G. H.; Hoogerhout, P.; Westerduin, P.; Notermans, S.; Van Boom, J. H.
CORPORATE SOURCE: Gorlaeus Lab., Leiden, 2300 RA, Neth.
SOURCE: Recueil des Travaux Chimiques des Pays-Bas (1987), 106(4), 129-31
CODEN: RTCPA3; ISSN: 0165-0513
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



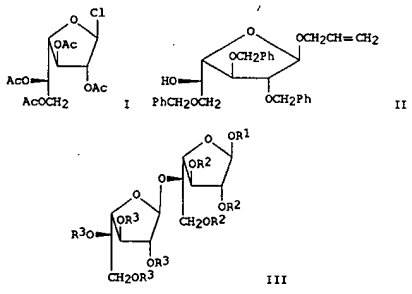
I

AB 2,3-Di-O-benzoyl-5-O-chloroacetyl-6-O-pivaloyl-β-D-galactofuranosyl chloride proved to be very suitable for the introduction, via the Helferich procedure, of three β(1-5) interlinked D-galactofuranosyl residues and a β-orientated spacer to give oligosaccharide I.
IT 20869-14-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and benzoylation of)
RN 20869-14-1 HCAPLUS
CN β-D-Galactofuranoside, methyl 5,6-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 33 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 29 May 1987
ACCESSION NUMBER: 1987:176760 HCAPLUS
DOCUMENT NUMBER: 106:176760
TITLE: Synthetic studies on glycosidic phytotoxins. Part III. Synthetic studies on derivatives of 5-O-β-D-galactofuranosyl-D-galactofuranose
AUTHOR(S): Sugawara, Fumio; Nakayama, Haruhiko; Ogawa, Tomoya
CORPORATE SOURCE: RIKEN, Wako, 351-01, Japan
SOURCE: Agricultural and Biological Chemistry (1986), 50(6), 1557-61
CODEN: ABCHA6; ISSN: 0002-1369
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

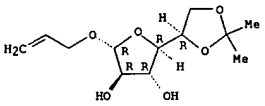


I II III

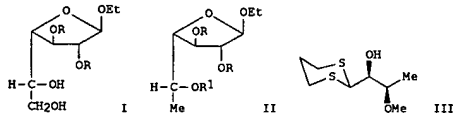
AB Galactofuranosyl chloride I, prepared from the corresponding 1-O-acetate and AlCl3, was converted in 6 steps into allyl galactofuranoside II, which was glycosylated with I in CH_2Cl_2 in the presence of $HgBr_2$ and mol. sieve to give the disaccharide III (R1 = allyl, R2 = $PhCH_2$, R3 = Ac) (IV). IV on deprotection gave the title compound III (R1 = R2 = R3 = H). IV was converted in 3 steps into III (R1 = H, R2 = R3 = $PhCH_2$), which is a key glycosyl donor in the synthesis of helminthosporoside (HS-toxin).
IT 107724-08-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and benzylation of)
RN 107724-08-3 HCAPLUS
CN β-D-Galactofuranoside, 2-propenyl 5,6-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 33 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

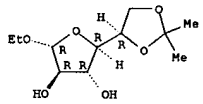


L4 ANSWER 34 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1984:51910 HCAPLUS
DOCUMENT NUMBER: 100:51910
TITLE: Synthesis of the tetrose synthon of the chromomycinone side chain from D-galactose
AUTHOR(S): Thiem, Joachim; Wessel, Hans Peter
CORPORATE SOURCE: Inst. Org. Chem. Biochem., Univ. Hamburg, Hamburg, D-2000/13, Fed. Rep. Ger.
SOURCE: Liebigs Annalen der Chemie (1983), (12), 2173-84
CODEN: LACHDL; ISSN: 0170-2041
DOCUMENT TYPE: Journal
LANGUAGE: German
GI



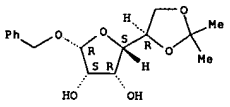
AB Galactofuranoside I (R = H) on sequential acetonation, benzylation, and acetal cleavage gave I (R = PhCH2), which by different routes was converted into fucose derivative II (R = PhCH2, R1 = H). The latter was O-methylated and then debenzylated to give II (R = H, R1 = Me), which on periodate oxidative cleavage followed by acetal formation gave D-threose synthon III of the chromomycinone side chain.
IT 76696-16-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and benzylation of)
RN 76696-16-7 HCAPLUS
CN β-D-Galactofuranoside, ethyl 5,6-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

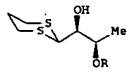


L4 ANSWER 35 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1981:620237 HCAPLUS
DOCUMENT NUMBER: 95:220237
TITLE: A simple regioselective partial hydrolysis of di-O-isopropylidene monosaccharides with copper(II) ion
AUTHOR(S): Iwata, Masaaki; Ohrui, Hiroshi
CORPORATE SOURCE: Inst. Phys. Chem. Res., Saitama, 351, Japan
SOURCE: Bulletin of the Chemical Society of Japan (1981), 54(9), 2837-8
CODEN: BCSJA8; ISSN: 0009-2673
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Cu(II) ion was effective for regioselective removal of the 5,6-O-isopropylidene group of α-D-mannose and α-D-glucose derivs. in alcs. at ambient temperature
IT 79940-49-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 79940-49-1 HCAPLUS
CN β-D-Mannofuranoside, phenylmethyl 5,6-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

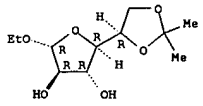


L4 ANSWER 36 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1981:121427 HCAPLUS
DOCUMENT NUMBER: 94:121427
TITLE: Syntheses of the chromomycinone side chain from carbohydrate precursors
AUTHOR(S): Thiem, Joachim; Wessel, Hans Peter
CORPORATE SOURCE: Inst. Org. Chem. Biochem., Univ. Hamburg, Hamburg, D-2000/13, Fed. Rep. Ger.
SOURCE: Tetrahedron Letters (1980), 21(37), 3571-4
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



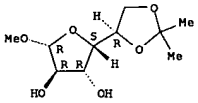
AB The dithianes I (R = H, Me), having the D-threo configuration, were prepared (8 and 13%) from D-arabinose and D-galactose in 9 and 11 steps, resp. Their dianions were used for nucleophilic addition to PhCHO as a model for the aglycon moiety of the chromomycinone side chain. The trianion formation of a dithiane-blocked α,β-dihydroxy aldehyde reported by R. P. Hatch, et al. (1978) could not be confirmed.
IT 76696-16-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as intermediate in preparation of chromomycinone side chain from
galactose)
RN 76696-16-7 HCAPLUS
CN β-D-Galactofuranoside, ethyl 5,6-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

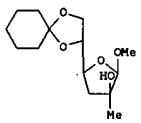


L4 ANSWER 37 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1980:408449 HCAPLUS
DOCUMENT NUMBER: 93:8449
TITLE: Interaction between methanol and D-glucose bis(benzeneboronate): synthesis of methyl D-glucofuranosides
AUTHOR(S): Briggs, June; McKinley, Ian R.; Weigel, Helmut
CORPORATE SOURCE: R. Holloway Coll., Univ. London, Egham/Surrey, TW20 0EX, UK
SOURCE: Carbohydrate Research (1980), 80(2), 340-2
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
AB When α-D-glucofuranose 1,2:3,5-bis(benzeneboronate) was treated with MeOH in the presence of H2SO4 72 h at room temperature, paper chromatog. revealed almost quant. conversion into Me D-glucofuranosides. Only traces of Me D-glucopyranosides were detected.
IT 73834-29-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 73834-29-4 HCAPLUS
CN β-D-Glucofuranoside, methyl 5,6-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 38 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1980:181571 HCAPLUS
DOCUMENT NUMBER: 92:181571
TITLE: The use of Grignard reagents in the synthesis of carbohydrates. I. The synthesis of deoxy and branched-chain deoxy sugars
AUTHOR(S): Kawana, Masajiro; Emoto, Sakae
CORPORATE SOURCE: Inst. Phys. Chem. Res., Wako, 351, Japan
SOURCE: Bulletin of the Chemical Society of Japan (1980), 53(1), 222-9
CODEN: BCSJA8; ISSN: 0009-2673
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

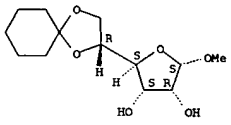


I

AB Two branched-chain deoxy sugars, I and its β-D-ribo isomer were easily prepared by the 1-step reaction of Me 5,6-O-cyclohexylidene-3-O-mesyl-β-D-allofuranoside (II) with MeMgI. Similarly, the corresponding α-mesylate (III) gave Me 5,6-O-cyclohexylidene-3-deoxy-2-C-methyl-α-D-ribo-hexofuranoside. These reactions involved 1,2-hydride shifts. The reaction of II and III with Me3CMgBr yielded 2 deoxy sugars, Me 5,6-O-cyclohexylidene-3-deoxy-β-D-arabino-hexofuranoside and the corresponding α-D-ribo isomer, resp. Under certain reaction conditions with the Grignard reagents, II afforded dimeric compds., in which 2 furanose rings were directly bound with a carbon-carbon bond. A convenient method for the preparation of II and III is also reported.
IT 58109-24-3P 73488-42-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 58109-24-3 HCAPLUS
CN α-D-Allofuranoside, methyl 5,6-O-cyclohexylidene- (9CI) (CA INDEX NAME)

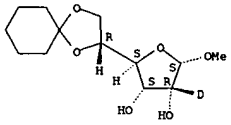
Absolute stereochemistry.

L4 ANSWER 38 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



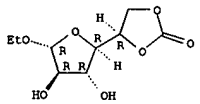
RN 73488-42-3 HCAPLUS
CN α-D-Allofuranoside-2-C-d, methyl 5,6-O-cyclohexylidene- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

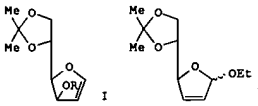


L4 ANSWER 39 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1980:76871 HCAPLUS
DOCUMENT NUMBER: 92:76871
TITLE: Synthesis of 5-thio-D-galactose
AUTHOR(S): Shin, Jeong E. Nam; Perlin, Arthur S.
CORPORATE SOURCE: Dep. Chem., McGill Univ., Montreal, QC, H3C 3G1, Can.
SOURCE: Carbohydrate Research (1979), 76, 165-76
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A synthesis of 5-thio-D-galactose, in the form of its crystalline, anomeric Me glycopyranosides, is described. Compds. prepared as intermediates included Et 2,3-di-O-(tert-butyldimethylsilyl)-5,6-O-carbonyl-β-D-galactofuranoside, the corresponding 5,6-dideoxy-5,6-epithio derivs., and Et 2,3,6-tri-O-acetyl-5-S-acetyl-5-thio-β-D-galactofuranoside. On methanolysis, the latter afforded Me 5-thio-α-D-galactopyranoside which, in turn, was transformed into Me 5-thio-β-D-galactopyranoside. Acetolysis proved to be less satisfactory for incorporation of the S atom into a pyranose ring-form. Characteristics of the 13C-NMR spectra of derivs. of 5-thio-D-galactose are described, including the fact that 1JC,H values for the anomeric pyranosides differ by only 1-3 Hz, as compared with .apprx.10 Hz for their O analogs.
IT 72661-58-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and tert-butyldimethylsilylation of)
RN 72661-58-6 HCAPLUS
CN β-D-Galactofuranoside, ethyl, cyclic 5,6-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 40 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1979:611761 HCAPLUS
DOCUMENT NUMBER: 91:211761
TITLE: Some reactions of furanoid glycals
AUTHOR(S): Bischofberger, Karl; Eitelman, Stephen J.; Jordaan, Amor
CORPORATE SOURCE: Natl. Chem. Res. Lab., Counc. Sci. Ind. Res., Pretoria, 0001, S. Afr.
SOURCE: Carbohydrate Research (1979), 74, 145-56
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



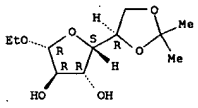
I II

AB The reaction of glycal I (R = H) with m-ClC6H4C(O)OOH in EtOH gave unsatd. glycosides II together with saturated Et glycosides formed by trans-ring opening of 1,2-epoxide intermediates. Similar results were obtained on peroxidn. of I (R = 2,3:5,6-di-O-isopropylidene-α-D-mannofuranosyl). Products resulting from osmylation of I and cleavage of the osmate esters are described. 2-Deoxy derivs. were prepared from I by methoxymercuration-demercuration and also by reduction of 2-bromo-2-deoxy derivs. obtained by ethoxybromination.

IT 71952-30-2P 71974-79-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and acetylation of)

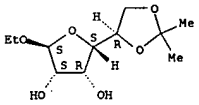
RN 71952-30-2 HCAPLUS
CN β-D-Glucofuranoside, ethyl 5,6-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 71974-79-3 HCAPLUS
CN α-D-Mannofuranoside, ethyl 5,6-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

L4 ANSWER 40 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
Absolute stereochemistry.

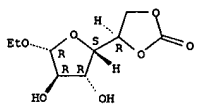


L4 ANSWER 41 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1979:457406 HCAPLUS
DOCUMENT NUMBER: 91:57406
TITLE: Acid-catalyzed hydrolysis of alkyl β-D-glucofuranoside 5,6-carbonates
AUTHOR(S): BeMiller, James N.; Nalin, Daniel J.
CORPORATE SOURCE: Dep. Chem. Biochem., Southern Illinois Univ., Carbondale, IL, 62901, USA
SOURCE: Carbohydrate Research (1979), 70(2), 319-22
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Rate consts. for the title process where alkyl = Me, Et, Pr were determined at
3 or more temps. and 2 or more acid concns., and the activation parameters were determined. The Ea and ΔS.dbldag. values do not eliminate the A-1 mechanism suggested by J. N. BeMiller (1967) or the A-2 mechanism suggested by W. G. Overend, et al (1962) and by B. Capan and D. Thacker (1967).

IT 46687-78-9 70835-84-6 70835-85-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(acid hydrolysis of, kinetics and mechanism of)

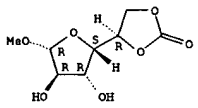
RN 46687-78-9 HCAPLUS
CN β-D-Glucofuranoside, ethyl, cyclic 5,6-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 70835-84-6 HCAPLUS
CN β-D-Glucofuranoside, methyl, cyclic 5,6-carbonate (9CI) (CA INDEX NAME)

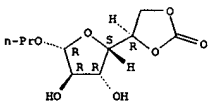
Absolute stereochemistry.



RN 70835-85-7 HCAPLUS
CN β-D-Glucofuranoside, propyl, cyclic 5,6-carbonate (9CI) (CA INDEX NAME)

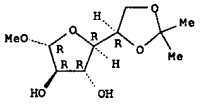
Absolute stereochemistry.

L4 ANSWER 41 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



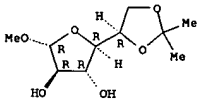
L4 ANSWER 42 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1978:510163 HCAPLUS
DOCUMENT NUMBER: 89:110163
TITLE: Presence of D-galactofuranose in the capsular polysaccharide of Klebsiella serotype K-41: synthesis of 5,6-di-O-methyl-D-galactofuranose
AUTHOR(S): Chambat, Gerard; Joseleau, Jean Paul; Lapeyre, Marielle; Lefebvre, Andree
CORPORATE SOURCE: Cent. Rech. Macromol. Veg., CNRS, Grenoble, Fr.
SOURCE: Carbohydrate Research (1978), 63, 323-6
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Me β-D-galactofuranoside on sequential 5,6-O-isopropylidenation, 2,3-di-O-benzylation, deisopropylidenation, methylation, hydrogenolysis, and hydrolysis gave 5,6-di-O-methyl-α-galactofuranose (I). I on reduction followed by acetylation gave 1,2,3,4-tetra-O-acetyl-5,6-di-O-methyl-D-galactitol (II). Gas chromatog. and mass spectral data for II were used to confirm the presence of 2,3-linked galactofuranose in the title polysaccharide. Further evidence for the presence of 2,3-linked galactofuranose was provided by periodate oxidation-NaBH4 reduction-hydrolysis sequence, which gave L-arabinofuranose.
IT 20869-14-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and benzylation of)
RN 20869-14-1 HCAPLUS
CN β-D-Galactofuranoside, methyl 5,6-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



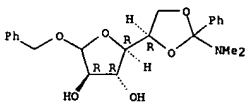
L4 ANSWER 43 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1978:121598 HCAPLUS
DOCUMENT NUMBER: 88:121598
TITLE: Synthesis of 2,5,6- and 3,5,6-tri-O-methyl-D-galactose
AUTHOR(S): Rao, Arepalli S.; Roy, Nirmolendu
CORPORATE SOURCE: Dep. Macromol., Indian Assoc. Cultiv. Sci., Calcutta, India
SOURCE: Carbohydrate Research (1977), 59(2), 393-401
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Starting from Me β-D-galactofuranoside, 3,5,6-tri-O-methyl-D-galactose (I) and 2,5,6-tri-O-methyl-D-galactose (II) were synthesized. The alditol acetates were prepared from I and II, and their behavior in gas-liquid chromatog. was compared. Mass spectra of the alditol acetates from I and II showed that these compds. gave fragmentations as expected. The alditol acetate from II was also prepared by an alternative route.
IT 20869-14-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and benzylation of)
RN 20869-14-1 HCAPLUS
CN β-D-Galactofuranoside, methyl 5,6-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



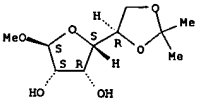
L4 ANSWER 44 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1978:105684 HCAPLUS
DOCUMENT NUMBER: 88:105684
TITLE: Synthesis of 5-O-β-D-galactofuranosyl-D-galactofuranose
AUTHOR(S): Van Heeswijk, Wolfgang A. R.; Visser, Henny G. J.; Vliegenthart, Johannes F. G.
CORPORATE SOURCE: Lab. Org. Chem., Univ. Utrecht, Utrecht, Neth.
SOURCE: Carbohydrate Research (1977), 59(1), 81-6
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Conversion of benzyl αβ-D-galactofuranoside into the 5,6-O-[α-(dimethylamino)benzylidene] derivative, followed by acetylation of HO-2 and HO-3, and selective ring opening of the acetal, gave benzyl 2,3-di-O-acetyl-6-O-benzoyl-αβ-D-galactofuranoside (I). The title disaccharide was prepared from I by reaction with 3,4,6-tri-O-acetyl-α-D-galactofuranose 1,2-(Me orthoacetate) followed by removal of protecting groups.
IT 65784-97-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and acetylation of)
RN 65784-97-6 HCAPLUS
CN D-Galactofuranoside, phenylmethyl 5,6-O-[(dimethylamino)phenylmethylene]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



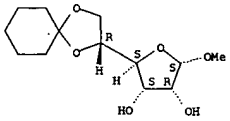
L4 ANSWER 45 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1977:423678 HCAPLUS
DOCUMENT NUMBER: 87:23678
TITLE: Acetal exchange reactions. Part 3. Monomolar acetalations of methyl α-D-mannosides - synthesis of methyl α-D-talopyranoside
AUTHOR(S): Evans, Michael E.; Parrish, Frederick W.
CORPORATE SOURCE: Aust. Wine Res. Inst., Glen Osmond, Australia
SOURCE: Carbohydrate Research (1977), 54(1), 105-14
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Me 2,3-O-isopropylidene-α-D-mannopyranoside (I) was prepared from Me α-D-mannopyranoside in 56% yield by acetalation with (MeO)2CMe2 in DMF containing 65 mM H2SO4, or from Me 2,3:4,6-di-O-isopropylidene-α-D-mannopyranoside in 75% yield by graded, acid hydrolysis. I underwent successive benzoylation, oxidation, and reduction to give Me 6-O-benzoyl-2,3-O-isopropylidene-α-D-talopyranoside. Treatment of Me α-D-mannofuranoside with 1.5 parts (MeO)2CMe2 in DMF containing a trace of acid gave 90% Me 5,6-O-isopropylidene-α-D-mannofuranoside.
IT 63167-75-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and tosylation of)
RN 63167-75-9 HCAPLUS
CN α-D-Mannofuranoside, methyl 5,6-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



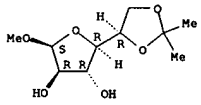
L4 ANSWER 46 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1976:17670 HCAPLUS
DOCUMENT NUMBER: 84:17670
TITLE: [1,2]-Hydride shifts in the reaction of methyl 5,6-O-cyclohexylidenemethylsulfonyl-3-O-α- and -β-D-allofuranoside with methylmagnesium iodide
AUTHOR(S): Kawana, Masajiro; Emoto, Sakae
CORPORATE SOURCE: Inst. Phys. Chem. Res., Saitama, Japan
SOURCE: Tetrahedron Letters (1975), (39), 3395-8
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 84:17670
GI For diagram(s), see printed CA Issue.
AB Treatment of 1,2:5,6-di-O-cyclohexylidene-α-D-allofuranose with MeSO2Cl gave 88% of the 3-O-methylsulfonyl derivative, which on refluxing in absolute MeOH, in the presence of H2SO4 gave 64% β-glycoside I (R = MeSO2, R1 = H, R2 = OH) and 28% α-glycoside II (R = R2 = H, R1 = MeSO2). II (R = MeSO2, R1 = H, R2 = OH) on treatment with MeMgI in Et2O gave 84% II (R = H, R1 = OH, R2 = Me) (III) and 2% of its C-2 epimer (IV). Under the same conditions, II (R = R2 = H, R1 = MeSO2) gave 29% II (R = R1 = H, R2 = Me) and 37% II (R = R2 = H, R1 = OH). The mechanism of formation of III and IV involved formation of a cyclic intermediate which underwent a stereoselective [1,2]-hydride shift and elimination of a mol. of MeSO3MgI in a concerted manner to give a uloside derivative, which on further attack by MeMgI gave the products.
IT 58109-24-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 58109-24-3 HCAPLUS
CN α-D-Allofuranoside, methyl 5,6-O-cyclohexylidene- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 47 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1968:497043 HCAPLUS
DOCUMENT NUMBER: 69:97043
TITLE: Syntheses of 2,3-di-O-benzyl-α-L-arabino-pentodialdo-1,4-furanoside and its β-anomer
AUTHOR(S): Saeki, Hiromichi; Iwashige, Tadahiro
CORPORATE SOURCE: Cent. Res. Lab., Sankyo Co., Ltd., Tokyo, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1968), 16(6), 1129-32
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB The title compds. (I and II, resp.) were synthesized from Me α-L-arabinofuranoside (III) and its β-anomer (IV), resp., and also from Me α-D-galactofuranoside (V) and its β-anomer (VI), resp. Tritylation, followed by benzylation and detritylation, of III and IV gave Me 2,3-di-O-benzyl-α-L-arabinofuranoside (VII) and its β-anomer (VIII), resp. Acetonation, followed by benzylation and deacetonation, of V and VI gave Me 2,3-di-O-benzyl-α-D-galactofuranoside (IX) and its β-anomer (X), resp. Oxidation of VIII with Me2CO-N,N'-dicyclohexylcarbodimide-H3PO4, or oxidation of X with Pb(OAc)4, gave syrupy I; semicarbazone m. 124°, [α]D -46.6° (CHCl3). Similarly, oxidation of VIII or IX gave syrupy II; semicarbazone m. 154-6°, [α]D 20.1° (CHCl3); 2,4-dinitrophenylhydrazone m. 122-3°.
IT 20869-13-0P 20869-14-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 20869-13-0 HCAPLUS
CN Galactofuranoside, methyl 5,6-O-isopropylidene-, α-D- (8CI) (CA INDEX NAME)

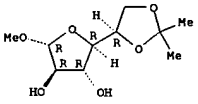
Absolute stereochemistry.



RN 20869-14-1 HCAPLUS
CN β-D-Galactofuranoside, methyl 5,6-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 47 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

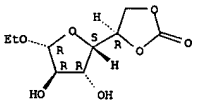


L4 ANSWER 48 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 12 May 1984
ACCESSION NUMBER: 1968:477674 HCAPLUS
DOCUMENT NUMBER: 69:77674
TITLE: Direct synthesis of deoxyglycosides employing crystalline O-acyldeoxyglycosyl halides
AUTHOR(S): Zorbach, W. W.; Bhat, C. C.; Bhat, K. V.
CORPORATE SOURCE: Div. Life Sci., Gulf South Res. Inst., New Iberia, LA, USA
SOURCE: Advances in Chemistry Series (1968), No. 74, 1-14
CODEN: ADCSAJ; ISSN: 0065-2393
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The preparation of a stable, crystalline O-acylglycosyl halide of 2-deoxy-D-arabino-hexafuranose and per-O-(p-nitrobenzoyl)glycopyranosyl halides of four 2-deoxy sugars is discussed; their utility in the direct synthesis of biol. important 2-deoxyglycosides is demonstrated by couplings with cardiac aglycons or with dialkoxypyrimidines. Tri-O-benzoyl-α-D-rhamnosyl bromide couples with two cardiac aglycons to give two cardenolides having the unnatural α-D-configuration. 4-O-Benzoyl-2,3-O-carbonyl-6-deoxy-α-D-mannosyl bromide also couples with cardiac aglycons, resulting in two, 1,2-cis-cardenolides, each having the β-D configuration. Exploration of some routes to a halide of 2-deoxy-D-ribo-hexofuranose is delineated. 24 references.
IT 27071-79-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 27071-79-0 HCAPLUS
CN Glucofuranoside, ethyl, cyclic 5,6-carbonate 2(or 3)-p-toluenesulfonate, β-D- (8CI) (CA INDEX NAME)

CM 1

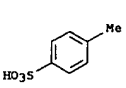
CRN 46687-78-9
CMF C9 H14 O7

Absolute stereochemistry.



CM 2

CRN 104-15-4
CMF C7 H8 O3 S

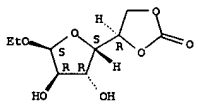


L4 ANSWER 48 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

L4 ANSWER 49 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 22 Apr 2001
ACCESSION NUMBER: 1951:6036 HCAPLUS
DOCUMENT NUMBER: 45:6036
ORIGINAL REFERENCE NO.: 45:1032i,1033a-e
TITLE: Desoxy sugars. XII. Experiments with O- and N-glycosides of some desoxy sugars
AUTHOR(S): Butler, K.; Laland, S.; Overend, W. G.; Stacey, M.
CORPORATE SOURCE: Univ., Birmingham, UK
SOURCE: Journal of the Chemical Society (1950) 1433-9
CODEN: JCSOA9; ISSN: 0368-1769
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
OTHER SOURCE(S): CASREACT 45:6036
AB cf. C.A. 44, 10662e; 45, 1190h. Most of the compds. studied had been prepared previously and full references are given. The anilides of the following sugars were prepared: 2-desoxy-D-glucose (I), m. 193-4° (deanilinized with 0.5% HCO2H at 80°); 2-desoxy-D-galactose, m. 134-5° (decomposition), [α]18D -116° → -53° (when catalyzed with 1 drop 0.1 N H2SO4) (in MeOH) (not previously reported); 2-desoxy-L-ribose, m. 174-5°, [α]D -142° (10 min.) → -58° (4 hrs.) (in pyridine), -73° (16 min.) → -6.6° (20 hrs., in MeOH); 2-desoxy-D-xylose (cf. C.A. 44, 10662e); D-glucose; D-galactose; D-ribopyranose, m. 114-16°, [α]D 62° (3 min.) → 50° (24 hrs.) (pyridine), 23° → 13° (17 hrs.) (MeOH); D-ribofuranose, m. 123-4°, [α]D 182° (4 min.) → 52.3° (22 hrs.) (pyridine), 135° (13 min.) → 12° (47 hrs.) (MeOH); and D-xylose. The hydrolysis rate of various anilides (usually in concns. of 0.044 mole/l. in either N or 0.1 N H2SO4 in MeOH) was followed polarimetrically to constant [α]D. (In a few instances, saturated solns. of the sugars were used.) Hydrolysis-time curves show that, in all cases, the desoxy sugar anilides were hydrolyzed much more rapidly than were the corresponding derivs. of the normal sugars. The following D-glucopyranosides were also formed: β-Et (II), m. 98-100°, [α]21D -37.9° (H2O) [tetra(p-nitrobenzoate), m. 215-16°, [α]18D 28° (Me2CO)]; α-Et (III) [tetra(p-nitrobenzoate), m. 110-15° (new)]; Et 2-desoxy (IV), m. 122-3°, [α]16D 120° (H2O) (prepared either from I and HCl in alc., or from D-glucal and EtOH-HCl) [3,4,6-tris (p-nitrobenzoate), m. 140-2°; 3,4,6-tris (p-toluenesulfonate), m. 100-1°, [α]17D 83°]; also prepared was Et α-D-glucofuranoside 5,6-carbonate (V), m. 131-2°. N HCl acting on IV at room temperature gave I (identified as the dibenzyl mercaptal, m. 153-4°). IV consumed about 1 mole Pb(OAc)4 in 20 hrs. and reduced 1 mole NaIO4, without formation of HCHO. α-Et 2,3-didesoxy-α-D-glucopyranoside (VI) (cf. C.A. 44, 6820f), m. 67-9°, [α]20D 140.6° (H2O), failed to reduce Pb(OAc)4 in AcOH; 4,6-di-p-nitrobenzoate, m. 131.5-2.5°, [α]19D 109°. A polarimetric comparison of the rates of hydrolysis of the various glucosides at 18° in N HCl showed that [α]D of II and III, resp., remained unchanged even after 120 hrs. V reached equilibrium (100° → 10°) in 92 min., IV in about 125.5 hrs. (126° → 46.8°), and VI in about 160 min. (124° → 30°). Thus IV is far more stable than VI. It appears that glycosides of 2-desoxyhexoses are more stable than those of the corresponding desoxypentoses. Attempts to form Et 2,3-didesoxy-α-

L4 ANSWER 49 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
or β-D-glucofuranoside were unsuccessful. Et glycosides of 2-desoxy sugars are somewhat more stable than are the Me glycosides.
IT 907572-29-6P, Glucofuranoside, ethyl-, α-D-, cyclic 5,6-carbonate
RL: PREP (Preparation)
(preparation of)
RN 907572-29-6 HCAPLUS
CN Glucofuranoside, ethyl-, α-D-, cyclic 5,6-carbonate (5CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 50 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ED Entered STN: 22 Apr 2001
ACCESSION NUMBER: 1950:12472 HCAPLUS
DOCUMENT NUMBER: 44:12472
ORIGINAL REFERENCE NO.: 44:2452a-i,2453a
TITLE: Desoxy sugars. IV. Synthesis of 2-desoxy-D-ribose from D-erythrose
AUTHOR(S): Overend, W. G.; Stacey, M.; Wiggins, L. F.
CORPORATE SOURCE: Univ. of Birmingham, UK
SOURCE: Journal of the Chemical Society (1949) 1358-63
CODEN: JCSOA9; ISSN: 0368-1769
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
OTHER SOURCE(S): CASREACT 44:12472
AB cf. preceding and following abstrs. Crude brucine erythronate (3 g.), obtained by hydrolyzing oxidized starch, was converted by (CO2H)2 into the lactone, and by means of Ac2O and dry HCl into 2,3-diacetyl-D-erythronolactone, m. 50-1.5°. Ca D-arabonate (I), m. 99-101° (from H2O), [α]D21 -6.8°, was formed from D-arabinose and Br, followed by aeration, treatment with Ag2O, filtration, precipitation with H2S, filtration, and heating with CaCO3. Solns. of 14.89 g. Ba(OAc)2.H2O in 43 ml. H2O and 7.31 g. Fe2(SO4)3 in 43 ml. H2O were added gradually to 1.42 l. H2O and the boiling mixture treated slowly with 123.4 g. I, filtered through carbon, treated with 86.04 ml. (100 volume) H2O2, cooled to 40°, and again treated with the same amount of H2O2. After filtration and evaporation in vacuo, the mixture was treated with an excess of MeOH, filtered, and evaporated, giving a pale yellow sirup setting to noncryst. glassy D-erythrose (II), [α]D14.5 -18.5° (equilibrium value in H2O), converted into 2,3-propylidene-α,β-methyl-D-erythroside (III), b10 100°, [α]D14.5 -55.5° (CHCl3), by shaking in dry Me2CO, MeOH, and 0.2% H2SO4 with CuSO4. (The L-isomer of III, b2 45-50°, [α]D 57.4° (cf. Felton and Freudenberg, C.A. 29, 7288.4) With 0.1 N H2SO4 at room temperature, III gave II; phenylosazone, m. 160-2.5° (from EtOH). Two other methods for preparing II were also carried out. Triacetylglucal (12.95 g.) was heated 15 min. with H2O, concentrated in vacuo, extracted with Et2O, washed, dried, heated with Ac2O and AcONa at 100° 3 hrs., evaporated, and EtOH distilled twice over the residue, which was then reextd. with Et2O and dried, yielding 1,4,6-triacetylpseudoglucal (IV), b0.01 115-25° [α]D18 66.8° (CHCl3), nD19 1.4839, decolorizes Br-H2O. IV (0.5 g.) in Et2O hydrogenated with Pt catalyst gave triacetyldidesoxyglucose, C12H18O7, oil, b0.01, about 120-30° [α]D15 32.63° (CHCl3), nD15 1.4548. Ozonization of IV (0.595 g.) in AcOH until Br in CCl4 was no longer decolorized gave 0.42 g. of the 2,4-di-Ac derivative of II, readily hydrolyzed to II by 0.05 N HCl. 1,2-Isopropylideneglucofuranose 5,6-carbonate (V) (cf. Haworth and Porter, C.A. 24, 1350), m. 226°, [α]D20 -37.4°, was treated in pyridine at 0° with MeSO2Cl, giving the 3-MeSO2 derivative of V, needles, m. 136-7°, [α]D18.5 -22.1°. V heated in EtOH with concentrated HCl at 70-75° formed glucofuranose 5,6-carbonate, m. 179°, [α]D17 18.1° (H2O). Warmed with an excess of aqueous Ba(OH)2 at 70°, V gave 1,2-isopropylideneglucofuranose, m. 158-9°, [α]D16.5 -13.6° (H2O). V (1 g.) at 45° in 25 cc. MeOH containing 0.3 cc. H2SO4 gave, after BaCO3 treatment, Me glucofuranoside 5,6-carbonate, m. 142-4° (from MeOH-Et2O), [α]D22

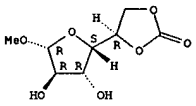
L4 ANSWER 50 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
-64°, which when oxidized in C6H6 with Pb(OAc)4 in AcOH at 0° followed by hydrolysis with Ba(OH)2, gave II. To 5.4 g. II in dry MeOH was added 33.7 cc. MeNO2, followed by 55 cc. MeOH contg. 1.42 g. Na, and, after shaking 24 hrs., the mixt. was treated with 40 cc. Et2O, causing the sepn. of a solid (VI) which, in H2O, was passed through a Zeocarb resin column, and the effluent evapd. The original mother liquors from VI were treated with AcOH, the mixt. evapd., given a treatment similar to that received by VI, and the combined effluents from the resin-bearing column dried and acetylated, followed by distn. of the AcOH and heating with C6H6 and NaHCO3; filtration and evapn. gave 1-nitro-D-erythro-3,4,5-triacetoxy-1-pentene (VII), yellow oil, nD18 1.4553, [α]D20 -8.6° (EtOH), undergoing decompn. on attempted distn. at 0.005 mm. and 160-70°. After 3 months VII crystd. and m. 116-18° (from aq. EtOH). VII in dry MeOH was hydrogenated with Pd at room temp., filtered, evapd. to a sirup, treated 1 hr. with N NaOH, the mixt. added to aq. H2SO4 at room temp., and the soln. neutralized with BaCO3, stirred with carbon, filtered, and evapd., giving a residue which reduced Fehling soln. and gave a blue Dische color, and which when mixed with H2O, PhNH2, and enough EtOH to insure a homogeneous soln. at 0°, gave, after evapn., 2-desoxy-D-ribose anilide (VIII), m. 175-6°, [α] 20.5° (equil. value in alc.). When hydrolyzed with 0.5% (CO2H)2, VIII gave 2-desoxy-D-ribose, m. 87-90° (from AcOEt, and then from iso-PrOH), [α]D22 -55.2° (H2O) (cf. Levene and Mori, C.A. 24, 2111, who give the m.p. 80°), giving VIII on reanilation.

IT 70835-84-6P, Glucofuranoside, methyl, cyclic 5,6-carbonate
RL: PREP (Preparation)
(preparation of)

RN 70835-84-6 HCAPLUS

CN β-D-Glucofuranoside, methyl, cyclic 5,6-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 51 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN

ED Entered STN: 16 Dec 2001

ACCESSION NUMBER: 1940:51543 HCAPLUS

DOCUMENT NUMBER: 34:51543

ORIGINAL REFERENCE NO.: 34:7856g-i,7857a-b

TITLE: Acetone derivatives of the mercaptals of some monosaccharides. V. The 5,6-monoacetone derivative of d-galactose dibenzyl mercaptal and the 6-methyl derivative of d-galactose

AUTHOR(S): Pacsu, Eugene; Trister, S. M.

SOURCE: Journal of the American Chemical Society (1940), 62, 2301-4
CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

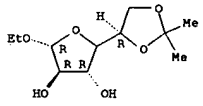
AB cf. C. A. 33, 8575.4. The mercaptal, m. 112.5° [α]D20 17.4°, is shown to be 5,6-acetonegalactose dibenzyl mercaptal (I) (cf. C. A. 30, 8170.3). I (15 g.) with yellow HgO and HgCl2 in EtOH gives 6.8 g. 5,6-acetone-β-ethylgalactofuranoside (II), [α]D22 -70° (H2O, c 1.625); it does not reduce Fehling solution, contains 1 Me2C group and requires 1 mol. of HIO4 for oxidation, HCHO being absent in the oxidation mixture Methylation with MeI and Ag2O of 6.8 g. II yields 5.7 g. of the 2,3-di-Me derivative, pale yellow liquid, which is hydrolyzed to 2,3-dimethylgalactose, [α]D22 64.7° (H2O, c 2.1), changing to 80.9° in 90 min., [α]D20 17.2° (CHCl3, c 1.62); PhNHNH2 in AcOH gives 3-methylgalactosazone, m. 176-9°, [α]D17 63.5° (C5H5N, c 0.425). The 4-methylgalactose dibenzyl mercaptal of P. and Lob (C. A. 24, 1846) is shown to be the 6-isomer; in its preparation diacetonegalactose dibenzyl mercaptal is converted to the Na salt and treated with MeI and the Me2C groups are removed with EtOH-HCl. HgO and HgCl2 give 6-methyl-β-methylgalactofuranoside, pale yellow, [α]D20 -78.7° (H2O, c 3.25), which on hydrolysis yields 6-methylgalactose; the osazone shows mutarotation, changing from 141° to 91.8° in 24 h. (C5H5N, c 1.045).

IT 898284-71-4P, Galactofuranoside, 5,6-acetone-β-ethyl-
RL: PREP (Preparation)
(preparation of)

RN 898284-71-4 HCAPLUS

CN Galactofuranoside, 5,6-acetone-β-ethyl- (4CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 52 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN

ED Entered STN: 16 Dec 2001

ACCESSION NUMBER: 1930:12294 HCAPLUS

DOCUMENT NUMBER: 24:12294

ORIGINAL REFERENCE NO.: 24:1350a-e

TITLE: Isolation of crystalline β- and Γ-ethyl glucofuranosides (β-ethyl glucosides) and other crystalline derivatives of glucofuranose

AUTHOR(S): Haworth, Walter N.; Porter, Charles R.

SOURCE: Journal of the Chemical Society (1929) 2796-806
CODEN: JCSOA9; ISSN: 0368-1769

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB A suspension of glucose in dry Me2CO, treated with COCl2, gives glucoseacetone carbonate (I), sinters 215°, m. 223-4° (decomposition), α5780]20 -36°; the mother liquors gave glucoseacetone and -diacetone. The same compound was obtained from glucoseacetone and COCl2. I and p-MeC5H4SO2Cl in C5H5N give the p-toluenesulfonyl derivative, m. 103-5°, α578023 -36°, α546123 -39° (Me2CO, c 0.6); Ba(OH)2 converts this into p-toluenesulfonylglucosediacctone, m. 120-1°. I in EtOH, treated with EtOH-HCl so that the concentration of the acid is 2.25% and of the sugar derivative 1.6%, gives after 6-8 hrs. β-Et glucofuranoside 5,6-monocarbonate (II), m. 164-5°, α578019 -50.6°, α546119 55.0° (H2O (H2O c 1.1); from the mother liquors there were isolated the 2,3-di-Ac derivative of the α-form, m. 159-60°, α678021 143°, α546121 157° (Me2CO, c 1.71), and of the β-form, m. 79-81°, α678023 39° α546123 42° (Mc2CO, c 0.93). Hydrolysis with Ba(OH)2 gives α-Et glucofuranoside, m. 82-3°, α578023 106°, 646123 116°, αD23 98° (H2O c 1.58); this is stable in contact with Fehling solution or cold dilute MnO4 for a period of several hrs. but is completely hydrolyzed in 0.6 hr. on heating with 0.01 N HCl. The β-deriv, showed αD26.6 -86°, α678026.5 93°, α546126.5 -101° (H2O c 0.9); this is stable toward 15% alkali but is easily hydrolyzed by 0.01 N HCl at 90°; it is stable toward dilute KMnO4 and Fehling solution I and MeOH containing concentrated H2SO4 give β-Me glucofuranoside 5,6-monocarbonate (III), m. 143-5°, [α]578022 α546122 -75° (H2O, c 0.7). Either II or III with dilute acid gives giucofuranose 5,6-monocarbonate, m. 182-3° (decomposition) α578020 18° (H2O, c 0.8); this also results from I and EtOH-HCl; the phenylosazone, yellow, m. 202-3° α678021 in CH5N changes from-103° to-48° in 4 days. The anilide, decomps. 180°.

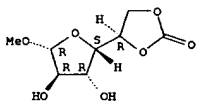
IT 70835-84-6P, Glucofuranoside, β-methyl-, 5,6-monocarbonate
RL: PREP (Preparation)
(preparation of)

RN 70835-84-6 HCAPLUS

CN β-D-Glucofuranoside, methyl, cyclic 5,6-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 52 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



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